

Research Article

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## Assessing storage insect pests and post-harvest loss of maize in major producing areas of Ethiopia

Published On: April 23, 2021 | Pages: 193 - 198

Author(s): Negasa Fufa\*, Tekalign Zeleke, Dawit Melese and Teshale Daba

The survey was conducted for three years from 2018 to 2020 cropping seasons in four regions, Amahara, Oromia, SNNP and Benishangul Gumuz, to identify storage insect pests and to assess post-harvest loss of maize in major producing areas Ethiopia. All the collected data were analyzed by using the SPSS software and difference among means were also compared. A total of 2 ...

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## Management and utilization practices of natural pasture in Western Ethiopia

Published On: April 06, 2021 | Pages: 147 - 153

Author(s): Kassahun Gurmessa\*

A survey was conducted in highland and mid altitude areas of Horro and Guduru districts of Oromia Regional States, Western Ethiopia with the objective of assessing the management system and status of grazing land. A single-visit multi subject formal survey method was followed to gather data about grassland holding, management systems and livestock holding. A total of ...

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## Genetic variability, heritability, genetic advance and divergence in Ethiopian cowpea [*Vigna unguiculata* (L) Walp] landraces

Published On: March 19, 2021 | Pages: 138 - 146

Author(s): Fantaye Belay\* and Kibrom Fisseha

Information on genetic variability in cowpea germplasm is important for crop improvement and for efficient utilization of the existing genetic resources. Hence, the objectives of the present investigation were to estimate genetic variability, heritability, genetic advance and to identify divergent parents from distantly related clusters among Ethiopian cowpea accessio ...

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## **Hygienic practice, microbial quality and physico-chemical properties of milk collected from farmers and market chains in Eastern Wollega zone of Sibu Sire districts, Ethiopia**

Published On: March 17, 2021 | Pages: 125 - 132

Author(s): Chala Adugna\* and Mitiku Eshetu

Thirty samples of fresh cow milk was taken from farmers immediately after milking and 15 milk samples was taken from market chains and analyzed for quality. From the sample about 31.08% were coagulate on clot on boiling test and 55.55% samples were coagulated on alcohol tests. Overall mean total bacterial counts, coliform and yeast and mould count were  $5.74 \pm 0.10.65$ , 3 ...

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## AMMI with BLUP analysis for stability assessment of wheat genotypes under multi locations timely sown trials in Central Zone of India

Published On: March 15, 2021 | Pages: 118 - 124

Author(s): Ajay Verma\* and GP Singh

AMMI analysis explained the highly significant effects of the environment, GxE interaction, and genotypes for wheat genotypes evaluated under restricted irrigation timely sown multi-location trials in the Central zone of the country during 2018-19 and 2019-20. About 77.1%, 12.2% & 2.3% had been contributed by environments, interactions and genotypes of the total sum of ...

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## Improving faba bean production and productivity through the integrated management of *Orobanche Crenatae* at Kutaber, Amhara Region, Ethiopia

Published On: March 10, 2021 | Pages: 114 - 117

Author(s): Akalu Gebru\* and Mekonnen Mesganaw

*Orobanche crenata* (parasitic weed) is highly limiting factor for faba bean productions and the most serious agricultural economic importance pests in south wollo, eastern Ethiopia. *Orobanche* infested areas located in Eastern Amhara, Kutaber, Dessie zuria, Tenta and Mekedella distinct which are 40- 120 km far from the capital city of South Wollo zone Dessie. Kutaber an ...

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## Value chain analysis of vegetables (onion, tomato, potato) in Ethiopia: A review

Published On: March 10, 2021 | Pages: 108 - 113

Author(s): Desalegn Wondim\*

Even though different studies were takes place, none of them can address the effective production constraints, marketing and its constraints and gender issues of vegetables as vegetables are one highly perishable agricultural products. Therefore, the reviewer wants to assess the production status and its constraints, marketing condition and value chain

actors includin ...

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## **Phenotypic characterization of sweet potato (*Ipomoea batatas* L.) genotypes in Ethiopia for selection of those possessing optimal dual-purpose**

Published On: March 08, 2021 | Pages: 099 - 107

Author(s): Selamawit Abebe Gitore\*, Benjamin Danga, Sylvia Henga and Fekadu Gurmu

This research mainly focuses on the morphological characterization of genotypes of sweet potatoes present in Ethiopia for the selection of those with optimum dual-purpose (as food and feed characteristics). From August to December 2019, alpha lattice design using two replication was performed under field condition for this experiment. At 90 days and 180 Days After Pla ...

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## **A study on management systems and performances of local chicken kept under smallholder farmers: The case of Jimmahorro district of Kelem Wollega Zone Western Oromia, Ethiopia**

Published On: March 06, 2021 | Pages: 092 - 098

Author(s): Soressa Shuma and Kassahun Gurmessa\*

This study was conducted in Jimma Horro District of Kellem Wollega Zone of Ethiopia to assess management systems, productive and Reproductive performances of chickens. Three Kebeles (the smallest administrative unit of Ethiopia) from each agro-ecologies of the district were purposively selected of which a total of 165 respondents; 55 from each agro-ecology were used f ...

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## Integrated management of chocolate spot (*Botrytis fabae* Sard) through host resistance and fungicide application in the highlands of Bale, Southeastern Ethiopia

Published On: February 24, 2021 | Pages: 086 - 091

Author(s): Ermias Teshome\* and Dagne Kora

Because of its nutritional value, Faba bean (*Vicia faba* L.) is one of the most important food legumes both as energy and protein source. It is among the most important pulse crops produced in Ethiopia in general and on the highlands of Bale in particular. Field experiment was conducted at Sinana Agricultural Research Center on-station using RCBD with three replication ...

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## Effect of integrating chickpea varieties with insecticides for the management of pod borer (*Helicoverpa armigera* Hubner) (Lepidoptera: Noctudae)

Published On: February 23, 2021 | Pages: 081 - 085

Author(s): Dagne Kora\* and Ermias Teshome

Chickpea (*Cicer arietinum* L.) is the world's second most important grain legume after common bean (*Phaseolus vulgaris* L.). Ethiopia is considered as a secondary center of genetic diversity for chickpea. The field experiment was conducted at Ginir district with the objectives to evaluate the effective management option against chickpea pod borer and to determine the op ...

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## Metallic nutrients in enset (*Ensete Ventricosum*) corm and soil sample from some West Shoa Zone, Oromia Regional State, Ethiopia

Published On: February 22, 2021 | Pages: 073 - 080

Author(s): Teressa Bedada\* and Alemayehu Abebaw

The aim of this study was to investigate the essential and non-essential metals concentration in corm of *Ensete ventricosum* and soil samples from some West Showa Zone. Ca and Mg were determined complecometric titration method, K and Na were analyzed using Flame Absorption Emission spectroscopy and the other metals with flame atomic

absorption spectroscopy after approp ...

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## **Dynamics of value chain in climate resilient vegetable production practices**

Published On: February 17, 2021 | Pages: 067 - 072

Author(s): Ujjal Raj Acharya\* and Krishna Prasad Pant

Climate resilient practices in farming is an integrated process that reduces risks in production and marketing. This study introduced an integrated package of climate resilient practices in vegetable farming to cope with climate change and related problems. The study that was carried out in Udayapur district of Nepal and it analyzed application of climate resilient pr ...

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## **Comparative study of chemical composition and evaluation of the In-Vitro antioxidant capacity of unripe and ripe banana species (Musa Sapientum) biowastes**

Published On: February 15, 2021 | Pages: 061 - 066

Author(s): Ibiyinka Ogunlade\*, Akinwumi Oluwafemi Akinmade, Adebayo O Ogunlade and Olugbenga Kayode Popoola

The effort of developing countries in addressing zero hunger (Goal 2) with good health and well-being (Goal 3) of Sustainable Development Agenda requires a multi-disciplinary analytical approach to waste materials capable of decomposing through aerobic and anaerobic conditions. Hence a research on ripe and unripe banana peels as potential sources of nutrients, essenti ...

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## **Resource conservation technology for sustainable productivity of intensive rice-based cropping pattern in Bangladesh**

Published On: February 13, 2021 | Pages: 053 - 060

Author(s): Mobarak Hossain\*, Mahfuza Begum, Moshir Rahman, Abul Hashem and Richard Bell

Exhaustive conventional tillage and removing residues of previous crops in the rice-based cropping system are labor intensive, costly, soil destructive and non-ecofriendly. In recent years, increased concerns for healthier food production and environmental quality, and increased emphasis on sustaining the productive capacity of soils, have raised concern in the maintenance ...

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## Effect of watering frequency on germination and early growth of maize (Zea mays) seed

Published On: February 13, 2021 | Pages: 048 - 052

Author(s): Gudisa Hailu\*, Tsega'ab Tesfaye and Rosa Ayalkibet

Maize (Zea mays) is one of the most important cereal crops grown principally during the raining season in Ethiopia which is commonly used for both human consumption and poultry feed. Green house experiment on the effect of watering frequency on germination and early growth of maize was carried out at Ambo Agricultural Research Center using a hybrid maize variety (Jiba ...

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## Ecological situation of acacia tortilis subspecies raddiana. Case study: In white Nile state, Sudan

Published On: January 28, 2021 | Pages: 043 - 047

Author(s): Goda MMB, Dosougi MA, Osman A and A Musa Ibrahim\*

This study conducted during the season 2017 at ED-Duem Locality which is laid at Northern White Nile State of Sudan, the main objectives of this study was measurement, listing of all acacia raddiana tree sites their assessed the physical characteristics of the height, diameter at breast height and were account the abundance, dominance, and survival % of natural regene ...

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## **The effect of Zinc chelate and Potassium sulfate topdressing on alleviating the Cadmium (Cd) and Nitrate (NO<sub>3</sub>-) toxicity in potato tubers of Ardabil province, Iran**

Published On: January 27, 2021 | Pages: 034 - 042

Author(s): Seyyede Khamsa Asbaghian Namini\*, Mohammad Jafar Malakouti and Akbar Ghavidel

Contamination of tuberous vegetables such as potato (*Solanum tuberosum* L.) with Cadmium (Cd) and Nitrate (NO<sub>3</sub>-) due to the imbalanced fertilization may pose health risks to consumers. Potato is one of the dominant agricultural vegetables in Iran which is consumed in different ways. Excessive amounts of Cd and NO<sub>3</sub>- in potatoes can lead to organ dysfunction and various ...

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## **Improved Midland Maize (*Zea mays* L.) Varieties Demonstration at Western Harerghe Zone of Eastern Ethiopia**

Published On: January 23, 2021 | Pages: 031 - 033

Author(s): Abdulfeta Tariku\* and Aseged Walelign

The research activity was carried out with the objective of evaluating and identifying adaptable improved maize varieties and to familiarize farmers with maize production techniques. It was executed at Badessa and Doba district of Western Harerghea Zone in main cropping season of 2019. The variety selection process was carried out from different dimensions including u ...

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## **Market chain analysis of Teff in Tole Woreda, Ethiopia**

Published On: January 22, 2021 | Pages: 020 - 030

Author(s): Tariku Legese Dibaba\*

Teff accounts for the largest share of the cultivated area and the major cash crops grown mainly for market in the study area. But the nature of the product and lack of proper functioning marketing system often resulted in lower producers' price. The current research attempted to analyze the market chain of teff in Tole woreda Oromia Region of Ethiopia with



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## **Climate smart Agriculture Interventions in Selected Agricultural Growth Program-II Districts of Harari Region and Dire Dawa Administration: Double Cropping Practices**

Published On: January 19, 2021 | Pages: 014 - 019

Author(s): Ibsa Aliyi Usmane\*, Abdulaziz Teha Umer, Nasir Siraj, Oromiya Magersa, Badaso Urgesa and Tashoma Urge

Climate smart technology intervention in production and productivity enhancement of agriculture sector for small holder farmers' livelihood improvement is indispensable options. Taking this in consideration the double cropping practice research activity was undertaken with objectives of evaluate the productivity and profitability of double cropping practice technology ...

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## **Seed Quality Analysis of Field Pea (Pisum Sativum L.) from Formal and Informal Sources in Enarj Enawuga and Yilmana Densa Districts, West Amhara Region, Ethiopia**

Published On: January 18, 2021 | Pages: 001 - 013

Author(s): Yenus Ali\*, Firew Mekibib and Zewdie Bishaw

The production and productivity of field pea crop in Amhara region depends mainly on the un availability of quality seed supply system for a number of improved varieties. Therefore, this study was conducted to assess the quality and seed management practices of field pea seeds from the informal and formal seed systems in Enarj Enawuga and Yilmana Densa Districts durin ...

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### **Review Article**

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## Role and economic importance of crop genetic diversity in food security

Published On: April 17, 2021 | Pages: 164 - 169

Author(s): Temesgen Begna\*

Determination of genetic diversity and their relationships among breeding materials is very crucial in crop improvement strategies. Characterization and evaluation of germplasm is pre-requisite to screen out the desired genetic materials for the genetic improvement programs. The collection of germplasm relies on the several number of accessions it possesses and the ge ...

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## Cause and cost of onsite nutrient loss replacement in the highlands of Ethiopia and implication of Soil and Water Conservation measures

Published On: April 07, 2021 | Pages: 154 - 163

Author(s): Kefyalew Tilahun Ejegue\*

Soil erosion and nutrient depletion has been a major national agenda and remains an important issue in the highlands of Ethiopia. In this review it was found that onsite nutrients are lost in agricultural land in the form of soil erosion, crop residue removal, harvested products, gaseous and leaching losses. Most of the essential plant nutrients are found on the top s ...

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## Review of beef cattle breeding research and achievements in Ethiopia

Published On: March 19, 2021 | Pages: 133 - 137

Author(s): Tesfaye Alemu Tucho\*, Tatek Woldu and Berhanu Shelima

A literature review was conducted based upon 17 research reports on the beef cattle breeding activities in Ethiopia with an objective of summarizing and compiling research findings in different experiments on breeding works of beef cattle in Ethiopia and indicating future research directions. The review testifies that 27 breeds or types of cattle with 7 distinct breed ...

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## Evaluation of reproduction performance and calf sex ratio of dairy cattle in selected locations of South-East Oromia

Published On: April 23, 2021 | Pages: 170 - 192

Author(s): Debele Guta\*

Dairy farmers in many parts of the world complain about the deviation from the normal calf sex ratio following Artificial Insemination (AI). The prospective and retrospective studies were conducted to compare the sex ratio of the calves born following Artificial Insemination (AI) and Natural Mating (NM) under institutional and smallholder-managed dairy farms.

This stu ...

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